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10/564,713	07/19/2006	Suhung-Gwon Kim	2443.0030000	9873

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1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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RAJ, RAJIV J

ART UNIT	PAPER NUMBER
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3686

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05/27/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,713	<b>Applicant(s)</b> KIM, SUHUNG-GWON	
	<b>Examiner</b> RAJIV J. RAJ	<b>Art Unit</b> 3686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-21, 28, 30 & 32 is/are pending in the application.
- 4a) Of the above claim(s)    is/are withdrawn from consideration.
- 5) ☐ Claim(s)    is/are allowed.
- 6) ☒ Claim(s) 13-21, 28, 30 & 32 is/are rejected.
- 7) ☐ Claim(s)    is/are objected to.
- 8) ☐ Claim(s)    are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on    is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No.   .
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>  </u>                                  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>  </u>  | 6) <input type="checkbox"/> Other: <u>  </u>                      |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claim 13-21, 28, 30 & 32 drawn to a method of mapping, processing and classifying extracted patient-language terms, classified in class 705, subclass 3.
  - II. Claims 24-27, 29, 31 & 33 are drawn to a method of extracting terminology from medical records, classified in class 705, subclass 3.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility as a means for mapping standard patient language cardinal symptoms has separate utility such as subcombination II has a means for performing extraction of patient language. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

3. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Jason Eisenberg on 05/20/10 a provisional election was made without traverse to prosecute the invention of subcombination I, claims 13-21, 28, 30 & 32. Affirmation of this election must be made by applicant in replying to this Office action. Claims 24-27, 29, 31 & 33 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Status of Claims***

5. This action is in reply to the amendment filed on 31 March 2010.
6. Claims 24-27, 29, 31 & 33 have been withdrawn.
7. Claims 30-33 have been added.
8. Claims 13-21, 28, 30 & 32 are currently pending and have been examined.

***Priority***

9. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. The term "*cardinal symptoms*" in claims 13-21, 28, 30 & 32 is a relative term which renders the claim indefinite. The term "*cardinal symptoms*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purposes of this examination this term will be interpreted as cited in the prior art.

12. The term "*substantially matches*" in claims 13-21, 28, 30 & 32 is a relative term which renders the claim indefinite. The term "*substantially matches*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purposes of this examination this term will be interpreted as cited in the prior art.

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 13-21, 28, 30 & 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross, Jr. et al.(US 5823948) (hereinafter Ross) in view of Pories et al. (US 2002/0082868 A1) (hereinafter Pories) in further view of "A Hierarchical Data Management Facility For Clinical Record Applications" (hereinafter NPL).

#### **Claim 13**

**Ross as shown, discloses the following limitations:**

- *using an input device to select or check one of the standard patient-language cardinal symptoms to enter the selected patient-language cardinal symptom in the chief complaint field so as to generate a new medical record that identifies the selected patient-language cardinal symptom as a chief complaint; (see at least Ross Column:2 Lines:49-67 Column:3 Lines:1-33 Claim:2)*
- *wherein the standard patient-language cardinals symptoms are accessed from a database; (see at least Ross Claim:2,4,6)*
  - *the standard patient-language . . . are mapped to standard codes; (see at least Ross Column:12 Lines:35-47)*

Ross does not disclose the following limitation, however Pories, as shown does:

- *displaying, using a processing device, standard patient-language cardinal symptoms on an interface of a display device as one of a selection item and a check item of a chief complaint field of a medical record; (see at least Pories Fig:3 Items:40,41 Fig:7 Items:100-190 & related text)*
- *wherein the standard patient-language cardinal symptoms are selected extracted patient-language terms used in existing medical records of patients regarding cardinal symptoms of the patients; (see at least Pories [0074-0078], Fig:13 Items:66b & related text)*
- *stores the standard patient-language cardinal symptoms so as to be free from association with any particular medical record; (see at least Pories Fig:1A Items:10-20 & related text)*
- *cardinal symptoms; (see at least Pories [0106])*

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross.

One of ordinary skill in the art would have added these features to Ross with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

Ross/Pories does not disclose the following limitation, however NPL, as shown does:

- *imparting a concept identifier of a standard code to each of the standard patient-language cardinal symptoms; (NPL)*

- *classifying each of the mapped patient-language cardinal symptoms according to whether a concept of the patient-language cardinal symptom exactly matches or substantially matches the imparted concept identifier of the standard code; (NPL)*

It would have been obvious to one of ordinary skill in the art to add the features of NPL into Ross/Pories. One of ordinary skill in the art would have added these features to Ross/Pories with the motivation to provide a more efficient and effective invention for formatting, manipulating & managing patient and/or medical terminology. (see at least NPL)

#### **Claim 14**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Ross further discloses the following limitations:

- *the database also stores selected terms regarding diagnosis names, operation names, terms used upon writing of the status of patients by nurses, terms used upon writing of the status of the patients by doctors, prescription terms used by doctors, and medicine terms; (see at least Ross Column:2 Lines:49-66 Claim:2 Fig:2 Items:101-111 & related text)*

#### **Claim 15**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 14. Ross further discloses the following limitations:

- *using the input device to perform a standard statement sentence write function that combines the selected terms used upon writing of the status of patients by nurses into a standard statement sentence used to write a medical record; (see at least Ross Column:2 Lines:49-66 Column:9 Lines:20-41 Column:13 Lines:48-58 Fig:2 Items:101-111 Fig:3 Items:107-113 & related text)*

#### **Claim 16**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Ross further discloses the following limitations:

- *as selection items applicable to writing of a sentence in the medical record; (see at least Ross Column:5 Lines:52-56 Column:9 Lines:20-41)*



Ross/Pories/NPL does not disclose the following limitation, however Pories, as shown does:

- *displaying further comprises displaying the standard patient-language cardinal symptoms; (see at least Pories Fig:3 Items:40,41 Fig:7 Items:100-190 & related text)*

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

#### **Claim 17**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Ross further discloses the following limitations:

- *using the input device to modify, delete, or add to the standard patient-language . . . in the database; (see at least Ross Fig:3 Items:101-113 & related text)*

Ross/Pories/NPL does not disclose the following limitation, however Pories, as shown does:

- *cardinal symptoms; (see at least Pories [106])*

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

#### **Claim 18**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Pories further discloses the following limitations:

- *communicating over a network with a doctor terminal, a nurse terminal, an examination room staff terminal, and a general medical affairs terminal to perform the displaying; (see at least Pories Fig:1A-B Items:10-20 Fig:3 Items:40,41 Fig:7 Items:100-190 Fig:9-18 Items:24, 25d, 60a-80 & related text)*

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

**Claim 19**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Pories further discloses the following limitations:

- *the selected extracted patient-language terms are from discharge summaries;* (see at least Pories [0074-0078])

Ross/Pories does not disclose the following limitation, however Pories, as shown does:

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

**Claim 20**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Pories further discloses the following limitations:

- *the selected extracted patient-language terms are separated into main concepts, concept qualifiers, and concept modifiers;* (see at least Pories Fig:1A-B Items:14-25e & related text)

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

**Claim 21**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 20. Ross further discloses the following limitations:

- *the main concepts are aligned on a spelling and concept basis; (see at least Ross Fig:3 Items:105-114 & related text)*

**Claim 28****Ross as shown, discloses the following limitations:**

- *selecting or checking one of the standard patient-language cardinal symptoms to enter the selected patient-language cardinal symptom in the chief complaint field so as to generate a new medical record that identifies the selected patient-language cardinal symptom as a chief complaint; (see at least Ross Column:2 Lines:49-67 Column:3 Lines:1-33 Claim:2)*
- *wherein the standard patient-language cardinal symptoms are accessed from a database; (see at least Ross Claim:2,4,6)*
- *the standard patient-language . . . are mapped to standard codes; (see at least Ross Column:12 Lines:35-47)*

Ross does not disclose the following limitation, however Pories, as shown does:

- *displaying standard patient-language cardinal symptoms on an interface of a display device as one of a selection item and a check item of a chief complaint field of a medical record; (see at least Pories Fig:3 Items:40,41 Fig:7 Items:100-190 & related text)*
- *wherein the standard patient-language cardinal symptoms are selected extracted patient-language terms used in existing medical records of patients regarding cardinal symptoms of the patients; (see at least Pories [0074-0078], Fig:13 Items:66b & related text)*
- *stores the standard patient-language cardinal symptoms so as to be free from association with any particular medical record; (see at least Pories Fig:1A Items:10-20 & related text)*
- *cardinal symptoms; (see at least Pories [0106])*

It would have been obvious to one of ordinary skill in the art to add the features of Pories into Ross. One of ordinary skill in the art would have added these features to Ross with the motivation to provide an improved invention accurately and effectively extracting storing and utilizing medical data for improved health care. (see at least Pories [0012-0017])

Ross/Pories does not disclose the following limitation, however NPL, as shown does:

- *imparting a concept identifier of a standard code to each of the standard patient-language cardinal symptoms; (NPL)*
- *classifying each of the mapped patient-language cardinal symptoms according to whether a concept of the patient-language cardinal symptom exactly matches or substantially matches the imparted concept identifier of the standard code; (NPL)*

It would have been obvious to one of ordinary skill in the art to add the features of NPL into Ross/Pories. One of ordinary skill in the art would have added these features to Ross/Pories with the motivation to provide a more efficient and effective invention for formatting, manipulating & managing patient and/or medical terminology. (see at least NPL)

### **Claim 30**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 13. Ross further discloses the following limitations:

- *retrieving a concept that is similar or broader to the patient language cardinal language symptom when the patient-language cardinal symptom does not exactly match; (see at least Ross Column:13 Lines:65-67 Column:14 Lines:1-5)*

Ross/Pories/NPL does not disclose the following limitation, however NPL, as shown does:

- *imparted concept identifier of the standard code; (NPL)*

It would have been obvious to one of ordinary skill in the art to add the features of NPL into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide a more efficient and effective invention for formatting, manipulating & managing patient and/or medical terminology. (see at least NPL)

### **Claim 33**

The combination of Ross/Pories/NPL disclose all of the limitations of claim 29. Ross further discloses the following limitations:

- *retrieving a concept that is similar or broader to the patient language cardinal language symptom when the patient-language cardinal symptom does not exactly match;* (see at least Ross Column:13 Lines:65-67 Column:14 Lines:1-5)

Ross/Pories/NPL does not disclose the following limitation, however NPL, as shown does:

- *imparted concept identifier of the standard code;* (NPL)

It would have been obvious to one of ordinary skill in the art to add the features of NPL into Ross/Pories/NPL. One of ordinary skill in the art would have added these features to Ross/Pories/NPL with the motivation to provide a more efficient and effective invention for formatting, manipulating & managing patient and/or medical terminology. (see at least NPL)

### ***Response to Arguments***

16. Applicant's arguments received on 31 March 2010 have been fully considered but they are not persuasive. Applicants' arguments will be addressed herein below in the order in which they appear in the response filed 31 March 2010.

17. In response to applicant's arguments regarding the presently examined claims, the Examiner has fully considered applicant's arguments and finds them unpersuasive in light of the presently cited art. Further, there are claims that have been restricted and added, and thus have been addressed in the current Office Action.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAJIV J. RAJ whose telephone number is (571) 270-3930. The examiner can normally be reached on Monday thru Friday 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry O'Connor can be reached on (571) 272-6787. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative

or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or (571) 272-1000.

Date: 05/20/10

/RJR/

Patent Examiner Art Unit 3686

/Vivek D Koppikar/

Primary Examiner, Art Unit 3686